

Notice of Allowability

Application No.

10/542,873

Examiner

Roberto Velez

Applicant(s)

TAN, BENG GHEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/15/2006.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Roberto Velez
Patent Examiner

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Matthew Cutler on 01/16/2007.

2. The application has been amended as follows:

Claim 1. (Currently amended) A method for detecting and monitoring wafer probe stability including the steps of: probing each die on a wafer; for each die determining whether the result of the probe is a pass or a fail; if the result of a probe is a fail, re-probing the die and determining whether the re-probe is a pass or a fail; once all the dies have been probed determining the rate of die re-probes that lead to passes; comparing the rate of passes on re-probes to a predetermined limit; if the rate of passes on re-probes is greater than the predetermined limit, assigning the probe status as unstable; and reporting the unstable probe status to another device.

Allowable Subject Matter

3. Claims 1-18 are allowed.
4. Claim 18 has been renumbered as claim 5, and claims 5-17 are renumbered 6-18, respectively.

The following is a statement of reasons for allowance: the prior art of record, taken alone or in combination, fails to disclose or render obvious, a method and apparatus for detecting and monitoring wafer probe stability including the steps of: if the result of a probe is a fail, re-probing the die and determining whether the re-probe is a pass or a fail; once all the dies have been probed determining the rate of die re-probes that lead to passes; comparing the rate of passes on re-probes to a pre-determined limit; and if the rate of passes on re-probes is greater than the predetermined limit, assigning the probe status as unstable; and reporting the unstable probe status to another device, as further defined at claims 1 and 17.

Claims 2-16 and 18 depending from claim 1 are allowed for the same reason.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsai (US Pat. 6,281,694) discloses a monitor method for testing probe pins.

Carney (US Pat. 6,043,668) discloses a planarity verification system for integrated circuit test probes.

Sigler (US Pat. 5,065,092) discloses a system for locating probe tips on an integrated circuit probe card and method therefor.

Ohmart et al. (US Pat. 5,589,765) discloses a method for final testing of semiconductor devices.

Khoury et al. (US Pat. 6,127,831) discloses a method of testing a semiconductor device by automatically measuring probe tip parameters.

Tsuchiya et al. (JP05072245A) discloses a device for discriminating probe contact state.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Velez whose telephone number is 571-272-8597. The examiner can normally be reached on Monday-Friday 8:00am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Ha can be reached on 571-272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Velez
Patent Examiner



HA TRAN NGUYEN
SUPERVISORY PATENT EXAMINER